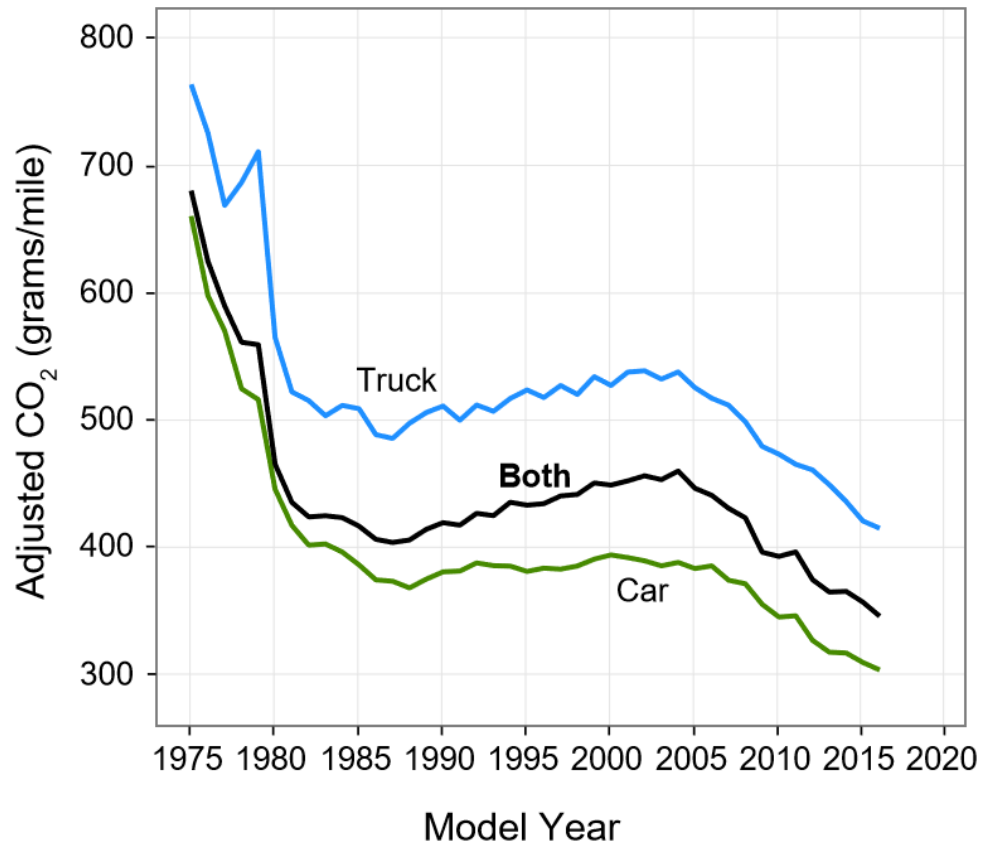


Bad data keeps us from good decisions

A joyride through what it takes to successfully transform an organization's approach to data, visiting the Large Hadron Collider, machine learning, and how to sell a pup on the way.

Adjusted CO₂ Emissions for MY 1975-2016¹

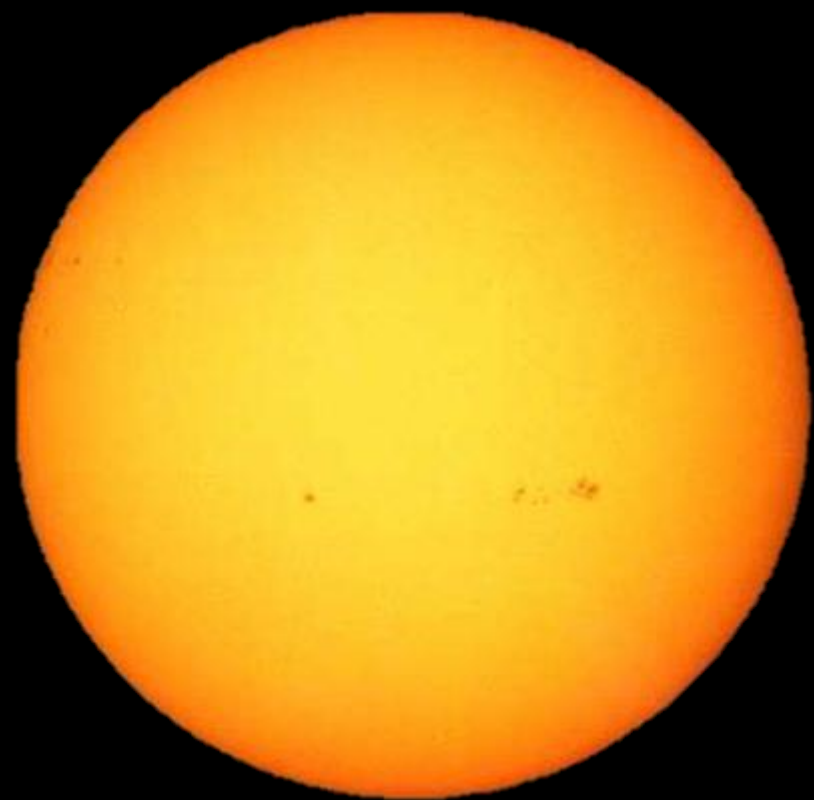




**Is your data
fit for its purpose?**











Bush vows justice will be sweeping

By Ralph Wladis
PHILADELPHIA EAGLE-TRIBUNE

A series of near-precision assaults shattered two symbols of America's military and financial power yesterday, killing untold numbers of people, halting Americans' daily routine, and forever destroying a nation's feeling that it can't happen here.

Within minutes at the start of the week's, unidentified terrorists hijacked two commercial jets and plunged them into the twin towers of New York's World Trade Center — reducing the 110-story landmarks to rubble and sending some workers leaping out windows — then crashed a third jet into the Pentagon outside Washington. A fourth hijacked plane, possibly also diverted toward the Washington area, crashed in Somerset County in Western Pennsylvania.

The terrorists' audacity was matched by the stunning coordination of their operation — all four planes had left their airports within 12 minutes of one another — and experts scrambled to start investigating how they had bypassed security and pulled it off. U.S. officials said they had had no reports that the attacks were imminent and can expect questions about the breakdown in intelligence.

The carnage seemed destined to stand as the worst attack on civilians in U.S. history. The death toll — which could take days, even weeks, to emerge — was likely to be far more catastrophic than the 2,000 killed nearly 60 years ago in the surprise bombing at Pearl Harbor.

Emergency workers at the World Trade Center site in Lower Manhattan faced a gruesome, Maitre d' scene. "There were bodies everywhere, body parts everywhere," said Joseph O'Leary, a National Guardsman from Sec ATTACK on A14

27 pages of coverage inside

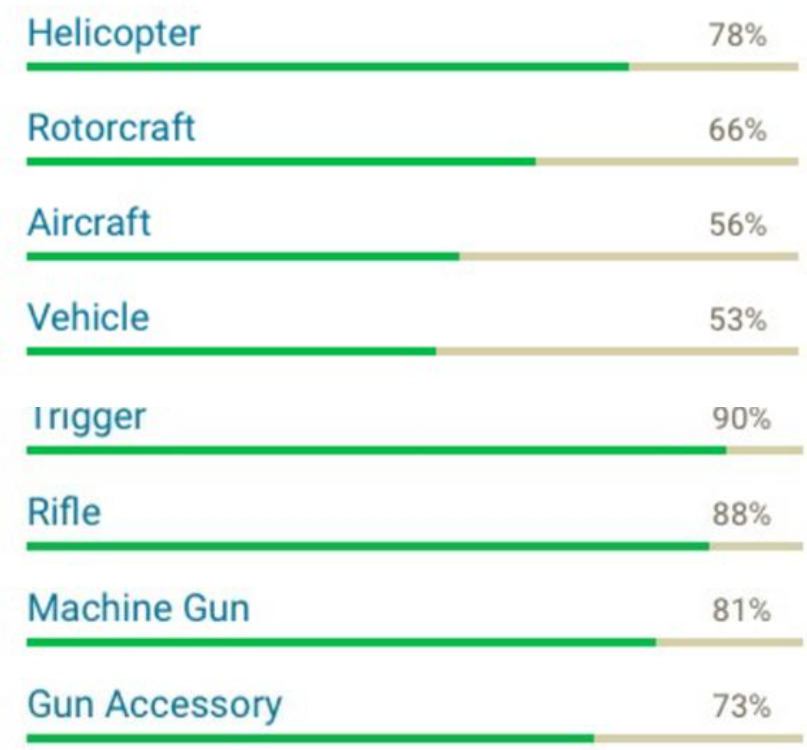



In seconds, a confident N.Y. is shaken





rifle_adv.png



What the algorithm "saw" after MIT's researchers turned the image into an adversarial example.  MIT

DATA

- Is *not* **good** or **bad**
- Is either **fit for purpose** or **not**

PEOPLE AND MACHINES

- Discard most data, and **select data**
- Are subject to **influence**

DATA QUALITY

The temperature
in this room is 21.5°C

- Completeness
- Uniqueness
- Consistency
- Timeliness
- Validity
- Accuracy

Data Management Wheel of Fortune!

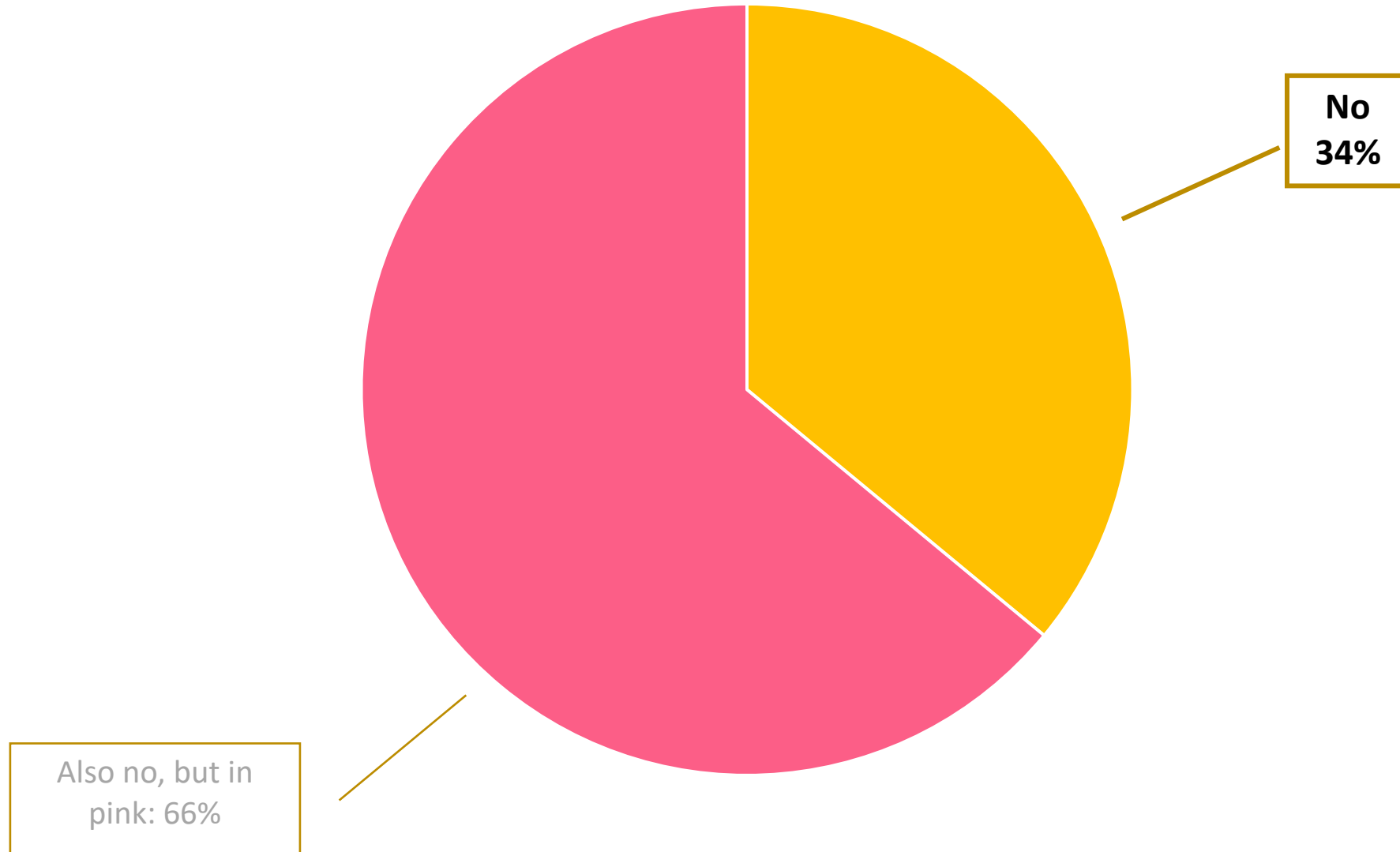


Data to decisions

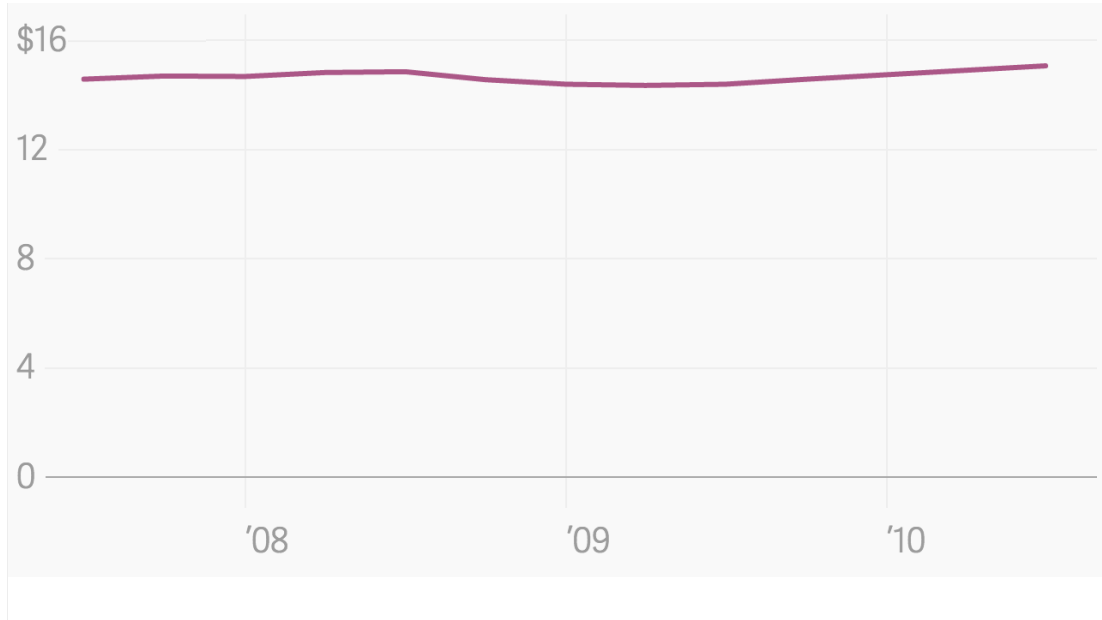


- Identify the **purposes**
- Specify the required **data quality**
- **Manage the data** to achieve this level of quality
- Make **good decisions...**

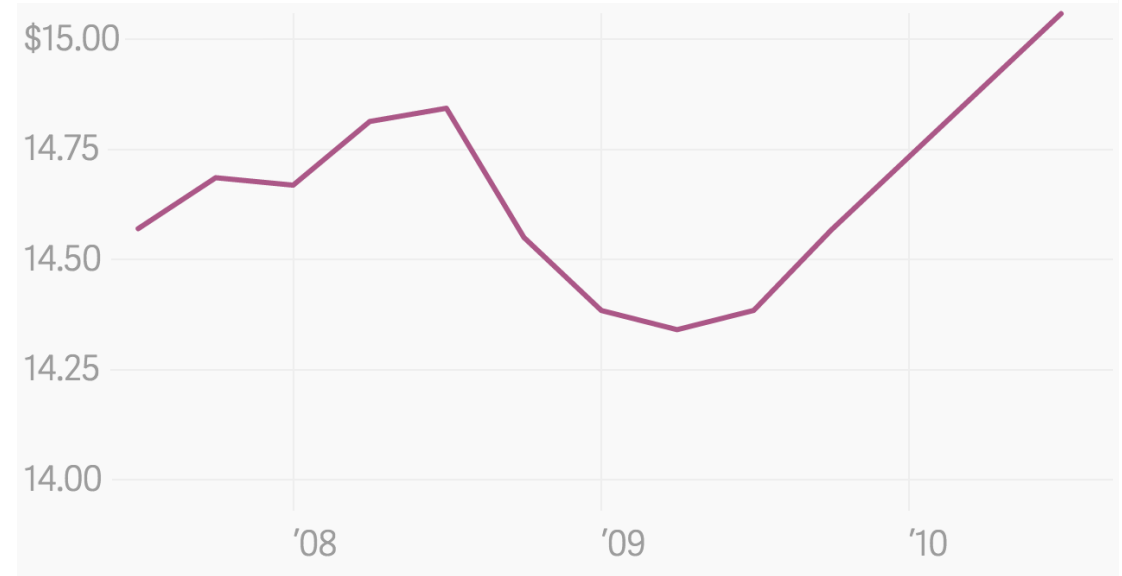
Are you confident interpreting data?



What matters?



or

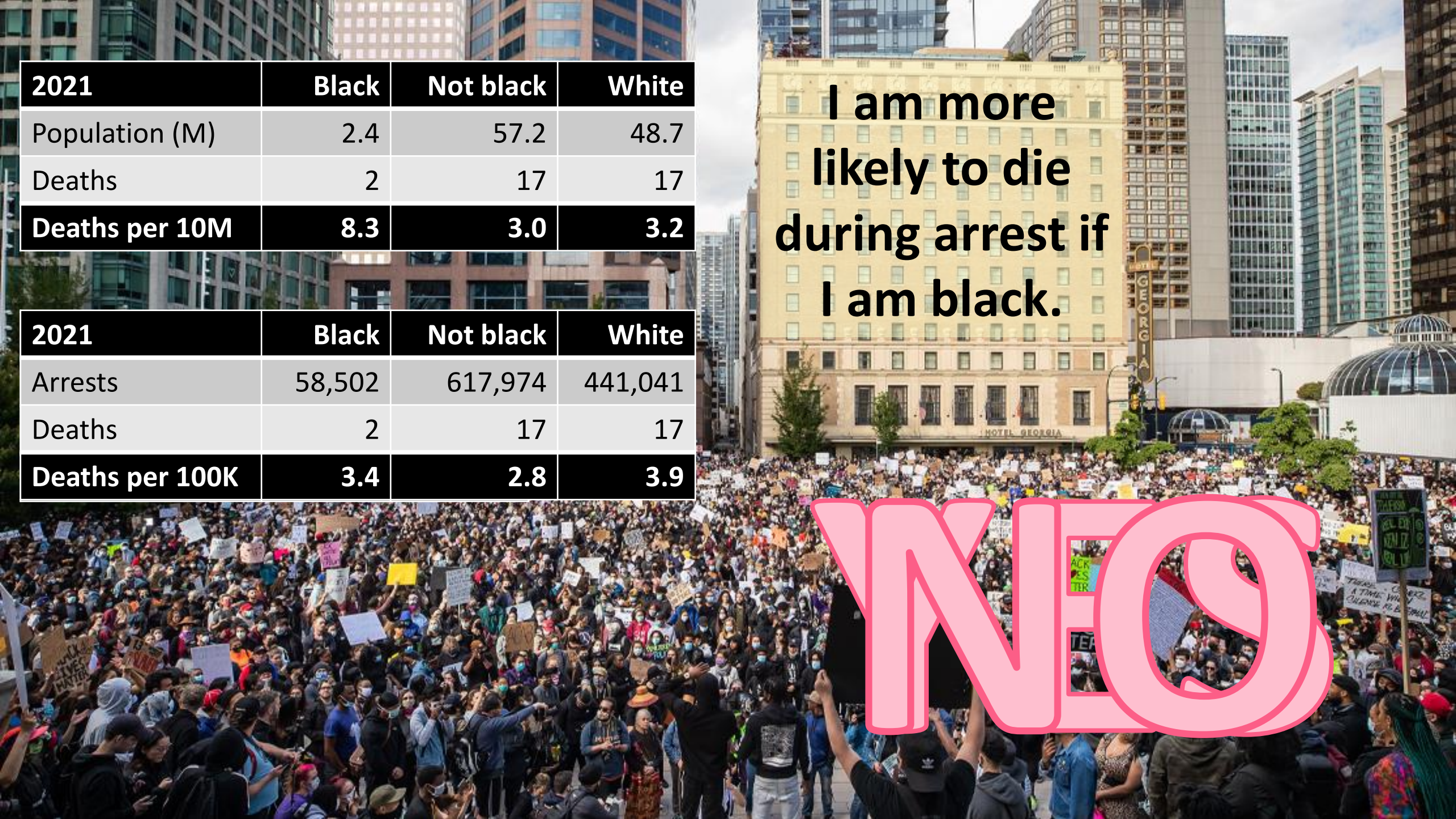


2021	Black	Not black	White
Population (M)	2.4	57.2	48.7
Deaths	2	17	17
Deaths per 10M	8.3	3.0	3.2

2021	Black	Not black	White
Arrests	58,502	617,974	441,041
Deaths	2	17	17
Deaths per 100K	3.4	2.8	3.9

I am more likely to die during arrest if I am black.

NO



Basic analytical skills for interpreting data

Questions I can ask about what I am shown

- What is the source?
- Was the data used of adequate quality?
- What other information do you have that is not included?
- What data did you decide not to collect or look at?

'Caution' markers when data is presented

- Only one predicted outcome
- Oversimplification – e.g. pie and bar charts
- Excessive filtering or narrow scoping

Achieving your data transformation

Four steps to enable data-led decision making

PURPOSE > DATA QUALITY > DATA MANAGEMENT > DECISION MAKING

1. Understand your maturity

Know what you're good at and what needs to be improved

Don't just assess once – assess regularly to monitor progress

1. Understand your maturity

2. Be clear about your vision

What does your organization look like when it is good at data?

A journey without a destination is hard to complete

1. Understand your maturity
2. Be clear about your vision

3. Be literate

And ensure your colleagues and supply chain are too

Educate everyone, in every role, appropriately

1. Understand your maturity
2. Be clear about your vision
3. Be literate
4. Be mindful

Data is an invaluable tool, and a powerful weapon.

Use it wisely.

1. Understand your maturity
2. Be clear about your vision
3. Be literate
4. Be mindful



Bad data keeps us from good decisions

Chris Lees

chris@dataclan.expert

+44 7773 770737

Bad data keeps us from good decisions

A joyride through what it takes to successfully transform an organization's approach to data, visiting the Large Hadron Collider, machine learning, and how to sell a pup on the way.